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AUTHOR Semple, Edward E., Jr.
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ABSTRACT

Journal papers, dissertations and monographs on theory and research in sociometrics in education are cited. Forty references are examined in the areas of classroom socialization structure and skills, the stability of choices in friendship, attraction between individuals, and the relationship between learning styles and sociometry. Teacher roles in student socialization are examined among the studies in elementary and secondary schools. The literature spans information from 1939 to 1982, concentrating on the past 20 years of findings. (CM)

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A REVIEW OF THE LITERATURE
OF
SOCIOMETRY

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Edward E. Semple, Jr., Ph.D.

James A. Garfield Local Schools
Garrettsville, Ohio 44231

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A REVIEW OF THE LITERATURE

of

Sociometry

In the Classroom

Spodek (1972) wrote that

Although teachers are concerned with children's academic achievement, they should also be concerned with social behavior, for social goals are important in education as well. In order to assess this, teachers can make use of sociometric techniques to provide such information. (p. 320)

One of the most interesting and rewarding techniques for teacher use is sociometrics. Cockriel (1973) suggests that sociometric grouping procedures can create academic climates that allow students the opportunity to change their relationships.

Why not have teachers just predict the social structure of the classroom? Cockriel and Fox (1976) reported that Gronlund (1956) found teachers and student teachers exhibit a wide range of accuracy (or, more precisely, inaccuracy) in predicting the sociometric status of individual students. Why some teachers are better judges of a classroom's social climate than others is

difficult to understand; as yet, no concrete factor of educational background, educational experience, or personality has clearly determined a teacher's predictive power. Hoffman (1966) found that teachers who placed decreasing emphasis on intelligence as a correlation to student popularity could moderately predict social status; however, no teacher in Hoffman's study maintained any consistent level of accuracy.

Cockriel and Fox (1976) in their study of 12 mid-western elementary school teachers reaffirmed previous conclusions that teachers cannot effectively discover the rejected through observation. It also showed that teachers cannot predict which students will have favorable or impartial feelings toward the rejectee.

Sociometric measures were the most commonly used methods of identifying the socially competent child, and of attempting to establish a child's social status relative to other children in a group according to Foster and Ritchey (1979).

Northway (1952) defined a sociometric test as a means for determining the degree to which individuals are accepted in a group (sociometric status), for discovering the relationships which exist among these individuals, and for disclosing the structure of the group itself. (p. 1)

Lindzey and Borgatta (1954) described a sociometric measure as

a means of assessing the attractions, or attractions and repulsions, within a given group. It usually involves each member of the group privately specifying a number of persons in the group with whom he would like to engage in some particular activity and, further, a number of persons with whom he would not like to participate in the activity. (p. 407)

Hallinan (1979) wrote:

Among the friendship patterns that may be observed in a classroom are the number of friendship choices given and received, the percentage of cross-sex friendships, the incidence of social isolates, and the grouping of students into friendship cliques. (p. 43)

According to Hubbel (1965) a clique may be "intuitively defined as a subset of members who are more closely identified with one another than they are with the remaining members of their group" (p. 377).

Gronlund (1959), Glidewell, Kantor, Smith, and Stringer (1966), Singleton and Asher (1977), and Schofield and Sagar (1977) all indicated few or no cross-sex friendships and a small number of social isolates in most cases.

Hallinan (1979) in a study of 51 sixth-, seventh-, and eighth-grade classrooms found that children's friendliness and popularity increased with larger class size, while the number of cross-sex friendships and the percentage of social isolates decreased. Sixth-grade classes had more best friends, fewer cross-sex friendships, and fewer social isolates than any other grade in the study.

Oden and Asher (1977) found that identifying and providing special attention to socially isolated children does not produce changes in peer ratings.

Studies of friendship cliques revealed that social class (Coleman, 1961; Gordon, 1957; Hollingshead, 1949) and student interests (Cusick, 1973) are important bases for clique formation.

Shoobs (1947) in his study of one classroom of 34 children differentiated friendship choices and workmate choices, and found that friendship choices played little or no part in the choices of workmates (competence).

Deitrich (1964) found that ability grouping of sixth-grade students did not necessarily limit a child in his friendship relationships; that pupils do not necessarily choose bright pupils for help with difficult lesson problems as has been many times assured; and they do not always choose a close friend for such help.

Loeb (1975) in a study of 456 children found that the skills needed to function under cooperative working conditions increase with age and that fourth and fifth graders exhibit more total social interaction and more task-oriented behaviors than younger students. By grade five overt competition disappeared when the students were placed in cooperative conditions and drops significantly under competitive conditions as children internalize social mores and become more subtle about competing.

Urban (1978) studied high school freshmen to determine their perceptions of socialization into their school situation as influenced by the selection of friendship groups. Two of the findings of the study were that the high school freshmen perceive a large teacher affect on the development of interpersonal relations among students, and the classroom atmosphere is perceived by the students as affecting the socialization of high school freshmen. These findings have significant implications for education, and establish a strong case for making two major changes at the high school level: Urban feels teachers should increase their efforts to understand the perceptions of students and be more sensitive to their social needs. Also, the real life concerns of students should become a greater part of the curriculum. Urban states that students' social lives and their academic lives need not be as separate as they seem to be. The single major conclusion resulting from Urban's study is that what occurs in the classroom is perceived as being critical to the lives of the students. The classroom includes the atmosphere, role of the teacher, interpersonal relationships among students, and the curriculum materials utilized.

Newcomb, Brady, and Hartup (1979) administered a sociometric test to 176 first- and third-grade students. Based on the results, half of the students were paired

with friends and half were paired with nonfriends. The students were exposed to cooperative and competitive group structures to assess the influence of friendships and incentive condition on task performance and social interaction. It was found that friendship facilitated the expressive and reciprocal components of social interaction. Friends and nonfriends did not differ in terms of performance outcome. However, the interaction between friends was marked by mutually directed guidance and suggestions.

Since mutual commands tended to elicit compliance while individualistic commands elicited noncompliance, the interaction between friends was more harmonious as well as more mutually directed than the interaction between nonfriends. Individualistic commands tended to elicit compliance as frequently as noncompliance from friends in contrast to the high frequency of noncompliance among nonfriends. Overall, there is now converging evidence that intimacy and mutual regulation characterize the social problem solving of children and their friends as well as their play interactions. (Newcomb, Brady, & Hartup, 1979, p. 880)

Stability of Choices

Both Moreno (1934) and Criswell (1939) found little change in mutual choices of isolated individuals. Such changes that did occur took place most often among unreciprocated friendship (acceptance) choices. On the other hand Lambert, Wiersma, Goodwin, and Roberts (1964) observed changes in social structure in fourth-, fifth-, and sixth-grade classes over a five-month period.

A consideration in sociometric assessment, made by Moore (1967) and by Foster and Ritchey (1979) lies in the use of negative nominations. This poses potential ethical problems in that it "contradicts the adult's usual disposition to discourage children from making blatant, rejecting statements about their companions" (p. 285). Being asked to identify disliked peers might well serve as a stimulus for group members to increase their negative interactions with these unpopular children.

Different sociometric questions yield different responses. Gottman, Gonso, and Rasmussen's (1975) factor analysis of sociometric ratings revealed that questions related to friendship ("Who would you like to play with?") formed one factor, while questions more related to task-oriented behavior ("Who would you like to work with?") formed another.

Oden and Asher (19) found that although ratings of targeted children as playmates changed as a function of intervention, the ratings as "workmates" or as best friends did not.

Attraction

Roistacher (1972) stated that the process of selecting friends is . . . a mutual one. There is no such thing as an isolated active individual selecting friends from a passive set of acquaintances. (p. 27)

Feelings toward others significantly depend on our perception of others' responses to us. Generally we like those who like us and dislike those who dislike us. Jones and Gerard (1967) considered others' feelings toward us to be "a major determinant of attraction to particular other persons" (p. 283). Blau (1964) and Homans (1961) also emphasized social approval in explaining interpersonal attraction.

The tendency toward liking reciprocity is not universal. The effects of received liking or disliking have been shown to be weakened by such variables as inconsistency (Deutsch & Solomon, 1959), attributed to ulterior motives of the other person (Dikoff, 1961), and comparison to previous levels of receiving liking (Aronson & Lindzey, 1965).

Human beings need some close friends in order to feel secure and comfortable; they strive to be loved, or at least to be personally related to others.

Schmuck and Schmuck (1971) wrote:

Without some affiliation, human beings tend to experience feelings of loneliness, worthlessness, and anxiety which prevent the maximum use of their potentials. If a classroom is organized so that the students feel liked and respected, they will be more likely to behave in a manner which makes them worthy of the liking and respect of others. Likewise, when the classroom environment is filled with anxiety, hostility, and self-doubt, the students will behave in unconstructive and unproductive ways, thus perpetuating the negative climate. (p. 21)

Research by Schmuck (1966) showed that classroom groups with diffuse friendship patterns exhibited more positive climate than did classrooms which were centrally structured. The research also indicated that the classroom group's structuring of liking patterns had decided effects on the individual students. Students were more accurate in estimating their own status in the centrally-structured groups.

Schmuck (1963) defined the two types of structures as follows:

Centrally-structured peer groups are characterized by a large number of pupils who agree in selecting only a small cluster of their classmates as pupils they like. Along with this narrow focus on a small number of pupils, many other pupils are neglected entirely. Diffusely-structured peer groups, on the other hand, are distinguished by a more equal distribution of liking choices; by no distinct subgroups whose members receive a large proportion of preferences; and by fewer entirely neglected pupils. (p. 341)

Learning Style and Sociometry

Sample (1982) studied one hundred twenty-eight sixth grade students to determine the relationship between subjects' learning style modality preferences and the learning style modality preferences of the subjects' sociometric choices in posed learning and social situations. Significant positive relationships were found where the subjects' tactile learning style standard score was correlated with the subjects' first. ($p < .01$) and second ($p < .05$) sociometric choices'

tactile learning style standard score in a learning situation.

The use of an alternative grouping for instruction is supported by the findings of the study. While traditional grouping in many cases is based on instructional and skills levels, the alternative grouping proposed here is based on peer choices and tactile learning style preferences. This type of grouping should lead to a positive learning situation for the students because the students would be learning with peers of their choice and through their preferred learning styles.

Sampe strongly suggests that students with tactile learning style preferences be grouped with their peer choices in learning situations. He also recommends that these instructional groups be taught through tactile learning style methods.

Sampe also found few cross-sex friendships on both the social and learning sociometric choices. The chi square was computed for the six sets of sociometric choices and found significant at the .001 level of probability in all cases.

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